IN THE CLAIMS

Please amend the claims as follows:

1.   (Previously Presented) A device, comprising:

circuitry adapted to communicate with a medical device that is adapted to acquire data regarding cardiac events occurring at two or more sites; and

display means for displaying a histogram of the data as two or more statistical distributions for the two or more sites, wherein the histogram includes both a right ventricular cardiac event distribution and a left ventricular cardiac event distribution.

2.   (Original) The device of claim 1, wherein the data includes both sensed intrinsic cardiac events and paced cardiac events.

3.   (Original) The device of claim 1, wherein the two or more sites include a first site and a second site in a first cardiac chamber.

4.   (Original) The device of claim 1, wherein the two or more sites include a first site and a second site in a first cardiac chamber, and further include a third site in a second cardiac chamber.

5.   (Original) The device of claim 1, further including a second histogram to provide a statistical distribution for atrial events.

6.   (Original) The device of claim 1, wherein the histogram comprises a plurality of histogram bins for the two or more statistical distributions, each of the histogram bins including:

a portion of the right ventricular cardiac event distribution; and

a portion of the left ventricular cardiac event distribution.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 09/738868
Filing Date: December 15, 2000
Title: SYSTEM AND METHOD FOR DISPLAYING CARDIAC EVENTS

Page 3
Dkt: 279.327US1

7. (Original) The device of claim 6, wherein the portion of the right ventricular cardiac event distribution is adjacent to the portion of the left ventricular cardiac event distribution in each of the histogram bins.

8. (Original) The device of claim 6, wherein the histogram further comprises a histogram axis extending through each of the histogram bins, and wherein the portion of the right ventricular cardiac event distribution and the portion of the left ventricular cardiac event distribution are on opposing sides of the histogram axis in each of the histogram bins.

9. (Original) The device of claim 6, wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are distinguished using different colors.

10. (Original) The device of claim 6, wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution each include both a sensed intrinsic cardiac event distribution and a paced cardiac event distribution.

11. (Original) The device of claim 10, wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are formed by summing the sensed intrinsic cardiac event distribution with the paced cardiac event distribution.

12. (Original) The device of claim 10, wherein the sensed intrinsic cardiac event distribution and the paced cardiac event distribution are distinguished using different fillings.

13. (Previously Presented) The device of claim 1, wherein:

the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are determined by dividing an event count in bin by a denominator;

the denominator is the sum of a total right ventricular sense (RVS) count, a total right ventricular pace (RVP) count, and a total left ventricular pace (LVP) count; and

the LVP count includes only left ventricular pacing events in which no right ventricular pace is delivered for a corresponding cardiac cycle.

14.   (Original) The device of claim 1, wherein the medical device is a pacemaker.

15.   (Original) The device of claim 1, wherein the medical device is a defibrillator.

16.   (Original) The device of claim 1, wherein the histogram includes programmed tachy zone rate thresholds.

17.   (Previously Presented) The device of claim 1, wherein the display includes a monitor for displaying the histogram.

18.   (Previously Presented) The device of claim 1, wherein the display includes a printer for printing a display of the histogram.

19.   (Previously Presented) A device, comprising:

        circuitry adapted to communicate with a medical device that is adapted to acquire data regarding cardiac events occurring at two or more sites; and

        a processor and display adapted to communicate with the circuitry and display a histogram of the data as statistical distributions for the two or more sites;

        wherein the two or more sites include a first site in a left ventricle and a second site in a right ventricle;

        wherein the histogram comprises a plurality of histogram bins for the statistical distributions;

        wherein the histogram includes both a right ventricular cardiac event distribution and a left ventricular cardiac event distribution;

        wherein the right ventricular cardiac event distribution is adjacent to the left ventricular cardiac event distribution; and

        wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution each include both a sensed intrinsic cardiac event distribution and a paced cardiac event distribution.

20.   (Original) The device of claim 19, further comprising a second histogram to provide a statistical distribution for atrial events.

21.   (Currently Amended) A programmer device, comprising:

circuitry adapted to communicate with a medical device that is adapted to acquire data regarding cardiac events occurring at two or more sites;

a display; and

a processor adapted to communicate with the circuitry and the display and to provide a histogram of the data on the display as two or more statistical distributions for the two or mores sites, wherein the histogram includes a plurality of histogram bins, at least one of the histogram bins includes a representation for at least a portion of at least a first statistical distribution for a first site and a representation for at least a portion of at least a second statistical distribution for a second site, the statistical distributions are selected from the set consisting of:

at least one left ventricle statistical distribution and at least one right ventricle statistical distribution;

at least two left ventricle statistical distributions;

at least two right ventricle statistical distributions;

at least one left atrium statistical distribution and at least one right atrium statistical distribution;

at least two left atrium statistical distributions; and

at least two right atrium statistical distributions.

22.   (Original) The programmer device of claim 21, wherein:

a cardiac event distribution is determined by dividing an event count in bin by a denominator;

the denominator is the sum of a total primary site sense count, a total primary site pace count, and a total secondary site pace count; and

the secondary pace count includes only secondary pacing events in which no primary pace is delivered for a corresponding cardiac cycle.

23.   (Previously Presented) The programmer device of claim 22, wherein:

the two or more sites include at least one left ventricle site and at least one right ventricle

site;

the primary site sense count is a right ventricular sense (RVS) count;

the primary site pace count is a right ventricular pace (RVP) count; and

the secondary site pace count is a left ventricular pace (LVP) count.

24.   (Original) The programmer device of claim 21, wherein the data includes both sensed

intrinsic cardiac events and paced events.

25.   (Previously Presented) A programmer device, comprising:

circuitry adapted to communicate with a medical device that is adapted to acquire data

·regarding cardiac events occurring at two or more sites;

a display; and

a processor adapted to communicate with the circuitry and the display to provide a

histogram of the data on the display as two or more statistical distributions for the two or mores

sites, wherein the statistical distributions are selected from the set consisting of:

at least two statistical distributions in a first ventricle and at least one statistical

distribution in a second ventricle; and

at least two statistical distributions in a first atrium and at least one statistical

distribution in a second atrium.

26.   (Original) A method, comprising:

acquiring data regarding cardiac events occurring at two or more sites; and

displaying the data in a histogram as two or more statistical distributions for the two or

more sites, wherein the histogram includes a right ventricular cardiac event distribution and a left

ventricular cardiac event distribution.

27.   (Previously Presented) The method of claim 26, wherein displaying the right ventricular

cardiac event distribution and the left ventricular cardiac event distribution in the histogram

comprises providing the right ventricular cardiac event distribution adjacent to the left
ventricular cardiac event distribution in each of the histogram bins.

28.   (Previously Presented) The method of claim 26, wherein:

the right ventricular cardiac event distribution and the left ventricular cardiac event
distribution are determined by dividing an event count in bin by a denominator;

the denominator is the sum of a total right ventricular sense (RVS) count, a total right
ventricular pace (RVP) count, and a total left ventricular pace (LVP) count; and

the LVP count includes only left ventricular pacing events in which no right ventricular
pace is delivered for a corresponding cardiac cycle.

29.   (Original) A method, comprising:

acquiring data regarding both paced and sensed cardiac events occurring at a left
ventricle and a right ventricle; and

providing a left ventricular cardiac event distribution adjacent to a right ventricular
cardiac event distribution in a histogram having a plurality of histogram bins, wherein the left
ventricular cardiac event distribution includes both paced and sensed cardiac event distributions,
and the right ventricular cardiac event distribution includes both paced and sensed cardiac event
distributions.

30.   (Original) The method of claim 29, further comprising providing an atrial event
distribution in a second histogram.

31.   (Currently Amended) A computer-readable medium encoded with computer-readable
instructions, when executed the instructions create a histogram for displaying data regarding
cardiac events as two or more statistical distributions, the histogram comprising:

a plurality of histogram bins for the two or more statistical distributions, each of the
histogram bins including:

a portion of a right ventricular cardiac event distribution; and

a portion of a left ventricular cardiac event ~~distribution;~~ distribution.

32.   (Previously Presented) The computer-readable medium of claim 31, wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are distinguished using different colors.

33.   (Previously Presented) The computer-readable medium of claim 31, wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution each include both a sensed intrinsic cardiac event distribution and a paced cardiac event distribution.

34.   (Previously Presented) The computer-readable medium of claim 31, wherein the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are formed by summing the sensed intrinsic cardiac event distribution with the paced cardiac event distribution.

35.   (Previously Presented) The computer-readable medium of claim 31, wherein the sensed intrinsic cardiac event distribution and the paced cardiac event distribution are distinguished using different fillings.

36.   (Previously Presented) The computer-readable medium of claim 31, wherein the right ventricular cardiac event distribution is adjacent to the left ventricular cardiac event distribution.

37.   (Previously Presented) The computer-readable medium of claim 31, further comprising a histogram axis extending through each of the histogram bins, wherein the portion of the right ventricular cardiac event distribution and the portion of the left ventricular cardiac event distribution are on opposing sides of the histogram axis.

38.   (Previously Presented) The computer-readable medium of claim 31, wherein:
          the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are determined by dividing an event count in bin by a denominator;
          the denominator is the sum of a total right ventricular sense (RVS) count, a total right ventricular pace (RVP) count, and a total left ventricular pace (LVP) count; and

the LVP count includes only left ventricular pacing events in which no right ventricular pace is delivered for a corresponding cardiac cycle.

39.   (Original) A computer-readable medium encoded with a software program for displaying cardiac event data, the software program executing the following:

retrieving data regarding cardiac events occurring at two or more sites; and

displaying the data in a histogram as two or more statistical distributions for the two or more sites, wherein the histogram includes a right ventricular cardiac event distribution and a left ventricular cardiac event distribution.

40.   (Previously Presented) The computer-readable medium of claim 39, wherein:

the right ventricular cardiac event distribution and the left ventricular cardiac event distribution are determined by dividing an event count in bin by a denominator;

the denominator is the sum of a total right ventricular sense (RVS) count, a total right ventricular pace (RVP) count, and a total left ventricular pace (LVP) count; and

the LVP count includes only left ventricular pacing events in which no right ventricular pace is delivered for a corresponding cardiac cycle.

41.   (Previously Presented) A device, comprising:

a processor;

communication circuitry to communicate with the processor and with a medical device that is adapted for acquiring data regarding cardiac events occurring at two or more sites;

a display to communicate with the processor; and

a memory to communicate with the processor, the memory being encoded with a software program that is executable by the processor to:

retrieve data from the communication circuitry regarding the cardiac events

occurring at the two or more sites;

form a statistical distribution for each of the two or more sites; and

display the statistical distribution for each of the two or more sites in a histogram,

the histogram including a plurality of histogram bins, wherein each

histogram bin includes a representation for at least a portion of the statistical distribution for each of the two or more sites.

42.   (Previously Presented) The device of claim 41, wherein each of the histogram bins includes:

a representation for at least a portion of a right ventricular cardiac event distribution; and

a representation for at least a portion of a left ventricular cardiac event distribution.

43.   (Previously Presented) The device of claim 42, wherein the representation for at least a portion of a right ventricular cardiac event distribution is adjacent to the representation for at least a portion of a left ventricular cardiac event distribution.

44.   (Previously Presented) The device of claim 42, wherein the histogram further comprises a histogram axis extending through each of the histogram bins, and wherein the representation for at least a portion of a right ventricular cardiac event distribution and the representation for at least a portion of a left ventricular cardiac event distribution are on opposing sides of the histogram axis in each of the histogram bins.

45.   (New) A programmer device, comprising:

circuitry adapted to communicate with a medical device that is adapted to acquire data regarding cardiac events occurring at two or more sites;

a display; and

a processor adapted to communicate with the circuitry and the display and to provide a histogram of the data on the display as two or more statistical distributions for the two or mores sites, wherein:

the statistical distributions are selected from the set consisting of:

at least one left ventricle statistical distribution and at least one right ventricle statistical distribution;

at least two left ventricle statistical distributions;

at least two right ventricle statistical distributions;

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 09/738868
Filing Date: December 15, 2000
Title: SYSTEM AND METHOD FOR DISPLAYING CARDIAC EVENTS

Page 11
Dkt: 279.327US1

at least one left atrium statistical distribution and at least one right atrium

statistical distribution;

at least two left atrium statistical distributions; and

at least two right atrium statistical distributions; and

a cardiac event distribution is determined by dividing an event count in bin by a

denominator;

the denominator is the sum of a total primary site sense count, a total primary site pace

count, and a total secondary site pace count; and

the secondary pace count includes only secondary pacing events in which no primary

pace is delivered for a corresponding cardiac cycle.

46.   (New) The programmer device of claim 45, wherein:

the two or more sites include at least one left ventricle site and at least one right ventricle

site;

the primary site sense count is a right ventricular sense (RVS) count;

the primary site pace count is a right ventricular pace (RVP) count; and

the secondary site pace count is a left ventricular pace (LVP) count.